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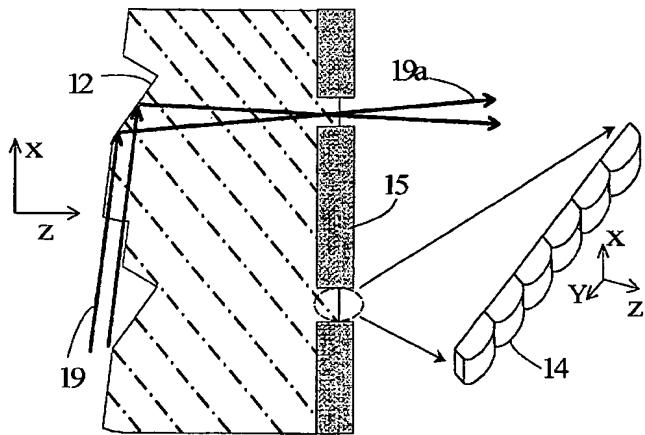
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(54) Title: REAR PROJECTION SCREEN, AND REAR PROJECTION SYSTEM USING THE SCREEN



(57) Abstract: A rear projection screen (20) and a rear projection video system using the screen are disclosed. A rear face (20a) of the screen (20) has a structured surface comprising a plurality of light-redirecting elements having transparent planar and/or curved facets (10-13b); each element comprises a facet (10) for transmitting incident light (19), a facet (12) for internally reflecting the transmitted light, at least one facet (11) intermediate and adjoining the facets (10, 12), and a further section (13a, 13b, 52) for separating the facets from those of adjacent elements. Internal angles at the junctions between the first and intermediate, and the intermediate and second, facets (10 & 11, 11 & 12) are at least 90° and no greater than 180°. The front face (20b) of the screen (20) may comprise black stripes (15, 53) and lenticular lenses (14, 40a, 59) to enhance the contrast of the screen. Improved tolerances in manufacturing of the tooling for the screen (20) and against minor component misalignments during system assembly are hereby provided, as are improvements to the robustness of the screen microstructure.

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